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FRONT COVER

Norwegian Countryside

Agricultural policy in Norway looks toward greater emphasis on growing grains than on producing more milk. (Photo courtesy of the Norwegian Information Service.)

BACK COVER

Norway: Agricultural Districts

The best agricultural districts in Norway comprise only 8 percent of the country's area, but they make up more than a third of its agricultural area.

NEWS NOTES

500 U. S. Agriculturists Aiding Other Countries

Approximately 500 agricultural scientists and technicians of the United States are now engaged in technical cooperation activities in other countries, according to a summary recently made by Dr. M. L. Wilson, Director of Extension, United States Department of Agriculture, before a United Nations group.

"ECA has been doing technical assistance work in Europe for several years," Director Wilson said.

"Not including the people working on other phases of its agricultural program, ECA now has 94 Americans in Europe and African colonies doing agricultural technical assistance work. Sixty-seven others are now in process, which will bring the total to 161. In Southeast Asia they have 65 already in the field and 10 others getting ready to go.

"Turning to the Point Four program administered by the Department of State, my own Department of Agriculture will shortly have 150 technicians working in 24 countries. And the Institute of Inter-American Affairs has 60 agricultural specialists working in seven countries.

"Adding all these along with the people from this country working for FAO, you get about 500 U. S. agricultural technicians now doing technical assistance work abroad on Government-sponsored programs.

"There is also the work of private groups—the many church groups and foundations such as the Rockefeller and Ford Foundations. The work of nongovernmental organizations in this area is growing every day.

"There is also work being done outside FAO by various countries, such as the joint effort of the British Commonwealth nations, called the Colombo Plan.

"We should also remember that sending Americans abroad is only one part of the technical assistance program. Another important part is in bringing people here to study our agriculture. . . . This year the United States Department of Agriculture will handle about 3,300 foreign visitors in the field of agriculture. These do not include the many hundreds of foreign students studying in our agricultural colleges. . . .

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ALICE FRAY NELSON, EDITOR

Food and the World Tension*

by FRED J. ROSSITER



Food is a common denominator for all people, whatever their race, nationality, or religion may be. True, it is not of major concern to people who have a sufficient quantity of it and sufficient income for its purchase. But to the people in the underdeveloped countries, where the supply of food is not always adequate and where the economic level is such that they cannot afford to purchase all that they wish, it is the most important consideration.

Whether the per capita consumption of food in the world today is as large as at the beginning of World War II is a debatable subject. The economists in the Food and Agriculture Organization of the United Nations estimate that it is about 4 percent less. The information supplied by United States agricultural attachés indicates that world wheat production in the last 2 years has ranged from 5 to 10 percent larger than prewar, that world rice production is now about the same as prewar, and that world meat production, in countries where information is available, is about 6 percent larger. But, when we divide this total supply by the estimated population of the world today—about 13 percent greater than in 1939—we come out with a lower quantity of food per capita. Statisticians further point out that the per capita consumption in the surplus countries, such as the United States and Canada, has risen during the past 12 years. As a result a smaller quantity of food is now available for our foreign friends. Some authorities question whether sufficient data are available to prove that the people of the world today are eating less than they did a decade ago. It is true that in some countries production of potatoes and other home-grown crops may have increased. In several areas, however, it is undoubtedly true that the volume of food available per capita is not as large as it was before World War II.

One thing is certain—world-wide unrest or awakening is now taking place among the underdeveloped areas of the world. The people have become dissatisfied with their poverty. Many countries have been controlled by foreign powers for the past century. As nationalism has developed and people have

obtained freedom, they have demanded better living conditions.

In many of the underdeveloped countries, the people are—in a real sense—on the front line of the present cold war. While Moscow is constantly informing them that the “capitalists” and “warmongers” of the West—headed by the United States—are plotting to gain control of their country and return them to colonialism, we and the other Western Nations are attempting to aid in their understanding of democracy. They receive so much conflicting information that they must be confused and wonder what to believe and who are their friends. Add to that their economic plight and relatively inexperienced governments and you begin to understand why certain areas of the world are places of unrest.

What does this situation mean in terms of the farming operations of United States farmers?

Before World War II, Asia annually exported large quantities of rice, sugar, peanuts, soybeans, copra, and coconut and palm oils; it imported wheat and flour and small quantities of other foods. Subtracting the one from the other, however, left Asia a net exporter of nearly 5 million tons of food annually. Since the war, as the result of disturbed political conditions, food production has declined in many parts of Asia, particularly Korea, French Indochina, and Burma—countries that were important exporters of rice in prewar days. This decline, along with increased populations in most of the Asiatic countries, has created a tremendous food problem in many areas. In 1950 Asia was a net importer of about 7 million tons of food. The change of that continent from a surplus to a deficit food area means that other agricultural nations of the world must export 12 million more tons of food than they did before the war. That food is mostly grain, and it is equal to about 9 percent more than the total grain produced in Minnesota last year.

There is one other important fact about the Asian situation. The chief surplus-food-producing area of the continent is the relatively small block of land made up of Thailand, Burma, and the three new

* Based on addresses given recently at the annual extension conferences of Minnesota and North Dakota.

Mr. Rossiter is Associate Director, OFAR.



Peace for the coming generation in Asia will depend heavily on whether rice bowls like these are full or empty.

states formerly known as French Indochina. That little area normally produces about two-thirds of all the rice moving in world trade. It is just outside the Iron Curtain and the Communists strongly covet it. The only other rice-surplus-producing areas of Asia are Formosa and southern Korea—two other areas that the Communists are trying to get.

Now let us turn to Europe to see what changes have taken place in the movement of food in that area. We find that the surplus agricultural areas are primarily located behind the Iron Curtain. In fact the Iron Curtain divides Europe's surplus food area from the deficit area almost as accurately as if it had been drawn for that purpose.

In 1938, the last complete year before World War II, the countries that are now behind the Iron Curtain shipped to Western Europe about 5.5 million tons of wheat, rye, corn, barley, and sugar. The Soviet Union usually had a surplus of wheat and rye. The Balkan countries normally exported wheat, rye, corn, and barley. Czechoslovakia and Poland

normally had a surplus of sugar, and Eastern Germany annually shipped about 1 million tons of breadgrains to Western Germany.

Though this movement almost completely stopped immediately after the war, some of it has since been resumed. In 1950, approximately 2 million tons of grain were delivered by Eastern Europe to Western European countries. Therefore, we find that the European countries in which we are particularly interested have approximately 3 million tons less food and feed available from Eastern Europe than before the war.

If we summarize the changed situation in Europe and Asia, we find an urgent need, as shown by these figures alone, for 15 million tons more food than in prewar years. This increase is equivalent to about 500 million bushels of wheat.

Now where could this food come from? The only countries outside Europe and Asia that produce sizable quantities of food for export are Argentina, Australia, Canada, and the United States.

The Argentine Government has followed a policy of paying farmers low prices for their produce and selling it to foreign customers at high prices. As a result, Argentine production and exports have gone down. Before the war, Argentina exported about 10 million tons of grain annually. Last year this figure was down to less than 3.5 million tons.

Canada and Australia have done all they could to help meet the need. Australia has increased its exports 25 percent—from about 3 million tons prewar to about 4 million last year. Canadian exports have gone up 40 percent—from 5 million to 7 million tons. The United States has supplied the rest; it has increased grain exports roughly 500 percent—from less than 3 million tons to more than 15 million.

An analysis of these figures shows that the export and import figures do not quite balance. The differences are made up by exports of soybeans and sugar and other crops. These figures are used only to indicate the demands that have been made on United States farmers by the chaotic world situation.

Foreign demand for United States agricultural products in the years ahead is difficult to estimate. One factor that makes it difficult is that the United States is what is called a residual supplier of agricultural products. The importing countries get all they can from other countries and then come to us for the rest. They do this because they have a limited supply of dollars, which they must spend for United States industrial products that they cannot get elsewhere. Part of this picture of uncertainty is the fact that during the last fiscal year 35 percent of our agricultural exports were paid for by the United States taxpayer through ECA or some other form of foreign aid. The year before the figure was even higher.

Now, what of the future?

During World War II the United States came into world leadership. This leadership was not sought by the United States but was attained through its production facilities, resources, and know-how. Since our country has attained this position, what are we going to do with the attendant responsibility? Can we close our eyes to the problems of the underdeveloped areas of the world, to those in need, and to those in trouble?

The United States cannot furnish all the wants in every country, but its record over the past few decades speaks well for the country. When national emergencies have developed in various parts of the world, the United States has given assistance—China

Famine Relief, Japanese Earthquake Relief, UNRRA aid following World War II, the Marshall Plan in Western Europe, and the furnishing of food to Yugoslavia and India during the past year. Dire emergencies will continue to arise and, as they do, we must remember that its food is possibly the best ambassador the United States has. We hope the emergency food shipments will soon cease, but we must be prepared for emergencies. As long as the cold war exists, we must have a reserve that can be used in critical areas to help friendly nations.

But we cannot feed the world. One thing we can do, however, is to help our fellow farmers of the world do a better job of farming so they can raise their own standards of living. That is where the Point Four program of technical assistance and the foreign visitor program come in. We can share our knowledge, our improved varieties, our research technicians, our system of extension service, and our knowledge of the use of insecticides and fertilizers. This is the only way substantial improvement can be made in the world food situation. These programs are well under way although still on a rather small scale.

Another question must be given attention in the present world situation: To what extent can we assist foreign countries to earn more dollars in order that they may buy the food and industrial supplies they need from this country? Most people want an opportunity to pay for their needs; they do not want to accept charity. It is essential that we decide whether we wish to give foreign countries a chance to earn dollars by selling their industrial and agricultural supplies in this country or whether we prefer to exclude these supplies and pay taxes to continually support foreign aid programs. The alternative is to disregard our international responsibility and put a fence around our country.

For the United States farmers the cold war has a direct implication. The United States must keep up a high agricultural production in order to provide a reserve food supply for friendly nations in need. In addition, the United States must do what it can to share its knowledge with farmers of other countries by sending technicians abroad and by training foreign technicians in this country.

If science were fully utilized by all farmers in every country, freedom from hunger throughout the free world could become a reality within the present century. Until freedom from hunger becomes much closer to realization than it is at the moment, any military armistice will rest on a weak foundation.

Agricultural Policy in Norway

by GERTRUDE GRONBECH



It is the policy of the Norwegian Government to encourage increased production of food and feed for domestic use and to promote economic equality between agriculture and other industries. The latter is part of the broader social policy of equalizing the standards of living of the various occupational groups, and, on the whole, is compatible with the production program. It is implicit in this policy decision that social and strategic benefits offset uneconomic aspects of the production policy.

General Production Goals

Because of natural environment, Norway's agriculture is primarily livestock farming. Norway is self-sufficient in livestock food products, with small, temporary surpluses available for export. On the other hand, breadgrain output is less than a fifth of requirements, while some coarse grain and oilcake are imported to supplement domestic feed production. Potatoes are an important crop, but no sugar beets or oil crops are produced in Norway. Vegetables and fruit are produced in limited quantities and some are imported.

In summary, the goal for food production is to produce (1) enough milk and other dairy products, meat, and eggs to meet domestic demand without developing surpluses for export; (2) vegetables, fruits, and edible fats to cover the greater part of the country's consumption; and (3) breadgrains and feedgrains in increasing quantities, although grains, particularly breadgrains, will still be far below requirements.

The policy of increased production for a domestic market relatively free from outside competition has evolved through the years. Norwegian farmers, like farmers elsewhere, believe they should have first claim on the home market, a claim made strong by the ruinously low prices of the early 1930's and now recognized by the government in its policy making. As a rule, the international market is not attractive to Norwegian agriculture, either in price or stability, and even a small surplus on the home market can depress prices and thus foster instability in the agricultural economy. The aim, therefore, is to avoid producing livestock products in quantities beyond

domestic demand and to encourage, instead, an increase in the production of grains. Such expansion, as well as greater output from grassland, would reduce needs for imports of food and feed.

From the national viewpoint, stabilizing agriculture is one facet of the postwar policy of stabilizing the entire economy. Increases in *general* production are an urgent need, and the drive for greater *agricultural* productivity is part of this aim. Moreover, Norway depends on imports for roughly half of its food; the privations that the Norwegian people have suffered as a result of reductions in imports in wartime have made them aware of the importance of domestic agricultural production. As the population becomes more urban, food shortages when imports are not forthcoming will bring greater and greater hardships. Maintaining an agricultural economy geared for high production levels is therefore of increasing strategic significance.

The production policy that has been indicated is being implemented by a number of programs, an illustration of which is found in the methods now being applied to increase grain production and to keep dairy production from exceeding the self-sufficiency level. Through the annual price negotiations, representatives of government and of farm organizations determine prices for grain and ceiling prices for milk and many other farm products. In the December 1950 price agreement, grain prices were raised about 10 percent and the government agreed that for a period of 4 years it will endeavor to hold constant this relationship of grain prices to milk prices. This action makes increased grain production in the arable areas more attractive than increased milk production. Concurrently, reduced allocations of imported feed concentrates and lower subsidies on feed further aid in limiting expansion of milk output.

The implementation of the production policy through regulation of this kind is elastic and can be modified when circumstances change. For example, at the end of World War II livestock production

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was far below prewar and the emphasis was on bringing production up to the self-sufficiency level, whereas now it is on keeping production from expanding beyond that point. An important factor in the effectiveness of the production policy is the work of the farmers' cooperatives. Though started and operated entirely on the initiative of the farmers, these organizations have received government support in their marketing programs.

Social considerations have influenced certain of the government activities to encourage increased production. The government favors smallholders in the rationing of feed, in the payment of subsidies on fertilizers, feed concentrates, and milk, and in the making of grants and loans. In certain remote mountain and fjord areas special subsidies are paid on milk. The aim is to improve the economic status of those least favorably situated and is in line with the general social policy.

Price Policy

As indicated, price policies are used to help in bringing about production adjustments. This is not, however, their only function. They also serve the general goal of stability for agriculture and economic equality of the farm population with other segments of society.

During World War II all-around price fixing was introduced by the Norwegian Price Regulation Act, under which the Price Directorate sets ceiling prices

on many farm products. After the war, when the supply situation improved, the farm organizations took steps to maintain prices at the ceiling level, work for which they are well-equipped because of the cooperative marketing programs developed by the farmers in the thirties. Since 1946, prices of agricultural products have been determined by representatives of the government and of the farm organizations and have been related to a Total Budget for Agriculture, which is incorporated in the general National Budget. Little by little the farmers' representatives have been able to put the price negotiations on a more definite basis. Up to 1948, prices were fixed for a year at a time. That year the negotiations for the first time resulted in a price agreement, which was made effective for 2 years.

In August 1950 the farm organizations and the government arrived at an agreement establishing the right of the farmers to negotiate for the determination of prices and specifying the rules of the procedure of the negotiations; in December of the same year it was further agreed to determine prices on the basis of statistical material regularly being assembled and analyzed by the Agricultural Budget Committee for the Total Budget for Agriculture.

The price agreement of December 1950, in addition to specifying ceiling prices for many agricultural products, introduced two new aspects of price fixing of a more controversial nature. First, as noted above, after raising grain prices about 10 percent,



Grass is a very important crop in Norway. Here hay hangs drying in the meadows of a typical rural district in eastern Norway.

the government undertook for a period of 4 years to endeavor to keep the relation of grain prices to milk prices constant. Second, farm prices for the first time were indirectly tied to the cost-of-living index, inasmuch as the prices were made subject to upward revision if industrial workers should receive higher wages on the basis of the cost-of-living index level in March 1951. This action set an important precedent and led to increases in agricultural prices in May and again in December 1951.

State Grain Monopoly (Statens Kornforretning)

Since World War I Norway has moved away from its earlier tradition of free trade; it has increased tariffs and in the past two decades has instituted other regulatory means such as import licensing. In the case of grain the State Grain Monopoly regulates imports and thus protects domestic production without a tariff and subsequent higher prices to the Norwegian people for this important food.

The State Grain Monopoly is an outgrowth of government practices to secure needed breadgrain. When grain imports were curtailed during World War I, the government tried to alleviate the food shortage by entering the business of importing grain and flour. In 1917 this business became the exclusive right of the government, which also purchased domestic grain and tried in various ways to expand domestic grain production. The present State Grain Monopoly was established by a law of June 22, 1928. It regulates imports of grain and flour under a system of contracts with private mills and importers of grain and flour. It also carries out government programs to encourage domestic production of grain and to maintain reserve supplies at a certain level. The State Grain Monopoly purchases at fixed prices all domestic grain offered for sale, thus stabilizing the domestic market.

Programs that have come to be administered by the State Grain Monopoly include the payment of subsidies on domestic and imported feed concentrates and fertilizers and of premiums on potato acreage and silaging of potatoes—measures that promote increased domestic production of food and feed.

A monopoly for the handling of feed concentrates, as a separate subdivision of the State Grain Monopoly, may be put into operation early in 1952.

Land Policy

Since the existing tenure arrangements seem satisfactory to both government and people, Norway does not have an urgent action program on this

particular aspect of land policy. But the thoughts and principles that have guided action in the past are reaffirmed from time to time. In 1945 the Storting (Parliament) in its first postwar session agreed on a so-called joint political program that had been worked out during the war years by representatives of the major political parties. The agricultural section contained this statement: "Individual farms make up the agricultural industry and these farms should be privately owned and operated by their owners (as they have been in Norway for centuries)."

Measures for redistributing and consolidating intermixed and joint holdings were adopted during the last century. The first Redistribution Act dates from 1821; the present act, passed in 1882, is now under revision. Any owner may request redistribution proceedings, and the redistribution court decides what, if anything, is to be done. The state appoints as chairman of this court someone trained for such work at the College of Agriculture. As far as practicable, reapportionment provides for each owner's share of land to be consolidated into one plot. If reapportionment of jointly owned land is wholly or partly impossible to achieve, the court can prescribe the use of the property under continued joint ownership. The court makes provisions for roads and the upkeep of fences and, if necessary, issues orders about ditches, removal of buildings, and disputes of ownership, boundaries, and other rights. Decisions of the court can be appealed. Part of the costs of the proceedings are borne by the state, the rest by the parties concerned.

Bringing new land under cultivation received some government support as early as the end of the last century, at first by bonuses and loans for new cultivation on existing farms and later through grants for establishing new farms on uncultivated land. After World War I the government adopted measures to promote this work on a larger scale. The object was twofold: to increase the output of agricultural products and to obtain more economic farms in terms of agricultural area per farm. At present the government is trying to accelerate the rate at which additional land is made ready for cultivation. Therefore, grants have been increased. Tractors and heavy equipment, which have been imported in recent years, have facilitated the work. Special attention is given to areas most suited to the growing of grain.

Many farms include land that is suitable for new cultivation. The problem on these farms has been not to acquire more land but to bring a larger part

of the farms into agricultural production. Government grants have provided about a fourth of the capital needed to make the necessary improvements. Between World War I and World War II government-subsidized new cultivation on existing farms amounted to more than 160,000 hectares.¹ There are good possibilities of further development in the same direction.

The work of colonization—organized efforts to provide new farms on hitherto uncultivated land as the sole or main means of livelihood—has been supported by the government since 1921 through grants and loans for buildings and cultivation. This work was begun in 1912 by the New Land Society. Colonization societies have purchased large areas of land for cultivation and have prepared them for colonization by surveying, parcelling out holdings, building roads and ditches, and sometimes preparing part of the ground for planting. The minimum size for colonization farms is 3 hectares and the average about 18. Subsidies and loans furnish roughly half the cost of establishing new farms. To obtain the rest of the financing, many colonists find employment off the farm, so that developing a farm often takes a long time. There are more than 12,000 colonist farms covering an area of more than 300,000 hectares, about a third of it cultivated.

Technological Development

Improvement of agricultural methods in Norway has long been promoted by the government. The first agricultural school, which was started in 1825, received a small government grant. The government held its first livestock show in 1861, established its first breeding ranch for horses in 1862, and published the first studbook for horses in 1902. Now the government holds livestock shows annually, publishes herdbooks for all livestock, and gives financial aid for the improvement of breeds and for the transportation of livestock to mountain pastures. Experiment stations were the first means by which the government promoted soil and plant culture.

The government has stations for testing seeds, fertilizers, soils, and feedstuffs. The plant protection service of the government assists in the fight against plant diseases and weeds. A Seed Control Committee, the expenses of which are paid by the government, promotes the breeding of seed. The government gives financial support for the building of potato cellars, silos, and grass-drying plants and for

the establishment of individually or cooperatively owned machine stations. These stations now number more than 1,600 and have played an important part in the mechanization of Norwegian farming and the reclamation of additional land for cultivation.

In bringing knowledge of new methods to farmers, the government supplements the advisory services begun by the County Agricultural Societies early in the nineteenth century and since that time carried on by the farmers' organizations. About 1850 the government began appointing state advisers in agriculture and now the Ministry of Agriculture has some 30. A state-employed chief of agriculture serves each County Agricultural Society, and the national government pays half the expenses of the county and district advisory services. As yet only about a fourth of the local districts employ advisers.

In 1946 the government set up an Agricultural Production and Rationalization Committee, whose proposals have resulted in legislation providing for improved technology in agriculture. It is due chiefly to the work and recommendations of that committee that activities like the following have become an integral part of the program for technological development. The Council of Agricultural Scientific Research coordinates the work of the various research institutes and publishes the results for use by farmers. The Norwegian Institute for Agricultural Economics advises farmers on problems of farm management and in 1947 took over the analysis of farm accounts, work that had been done since 1911 by the Royal Agricultural Society of Norway. The Institute of Agricultural Engineering tests new makes of machinery, both foreign and domestic, to see that they meet certain standards before dealers are permitted to distribute them to Norwegian buyers. Government subsidies and loans are available to individuals or cooperatives for establishing machine stations. Under The Dairy Herd Improvement Program, government funds have been increased for herd improvement associations, which inform farmers of improved methods of feeding dairy cattle and keep the necessary records for the rational breeding of dairy cattle. The Rural Water Supply Act provides for government financial assistance in rural areas for obtaining pipes for a running water supply in houses and barns. The expansion of the extension service in Norway with special emphasis on local district advisory services was approved by the Storting in 1948. These are examples of the varied ways in which the Committee has fostered technical guidance and progress in agriculture.

¹ A hectare equals about 2.5 acres.

Rice in Burma



The wooden plow drawn by cattle is a familiar sight in Burma's rice fields. This farmer is preparing his field for dry land, or upland, rice.



Rice is sown broadcast in the nurseries and transplanted to the fields when the seedlings are about 1½ feet high. The stakes shown in the picture are used to mark the area that has been sown.

Burma is an agricultural country whose economy is tied up chiefly with one crop—rice. That crop employs twice as many people in its cultivation as all the other crops combined. Burma is one of the three major sources of world rice supplies and is particularly important for Asia's import needs. Before the war Burma was the world's largest exporter of rice, although the country ranked fourth in output. Its exports comprised 30 percent of world rice trade and exceeded the combined total of the other two major exporters—Indochina and Thailand.

During World War II, production dropped considerably and, despite the restoration of some cultivation, the present acreage is about 25 percent smaller and exports are less than half the former volume.

About 98 percent of the production is winter crop, or wet land, rice, grown in the extensive river deltas, low-lying coastal regions, and upstream river districts of Lower Burma, where the heavy monsoons and high temperatures are ideal for growth. The dry land, or upland, rice is raised on hill tracts, with rainfall sufficient to ensure growth but not to retain a level of water in which the rice may grow.

Preparation for the main, or wet land, crop begins in April with the repair of plows and harrows, the two implements necessary to Burma's rice cultivation, and with the repair of broken dikes. Plowing operations on about 10 percent of the area to be planted begin with the advent of the monsoon, as soon as the sun-baked clay has softened sufficiently to permit plowing. When one plowing and from eight to ten harrowings have worked the soil into a fine mud, and all weeds are disposed of, the water is drained off and the field is ready for sowing. Meanwhile, the seeds will have been soaked in water for about 24 hours and will have sprouted for another day or so. The first sowing takes place in the nursery late in June and early in July. The seeds are sown broadcast. When the seedlings have taken root, about an inch of water is run into the nursery; the water height is increased gradually as the seedlings mature. In 35 to 40 days these seedlings are about 1½ feet high and ready for transplanting. In the meantime, the main area will have been plowed and harrowed, in preparation for transplanting.

After the rice is transplanted, it grows rapidly. Flowering occurs in October and November; then the ears form and develop very quickly. As the monsoon rains abate and the water level drops, the ears fill and ripen. By early December the paddy fields have dried sufficiently to permit harvesting. Reaping is almost entirely by hand; only the sickle is used.

Before the reaping begins, threshing floors are made by clearing and leveling plots adjacent to the villages. The sheaves are tramped on these floors by buffaloes in order to separate the grain from the straw. The straw is then removed from the threshing floor and the grain collected into heaps.

Next the threshed grain is winnowed by hand. A sieve constructed of narrow strips of bamboo having a mesh large enough to permit the passage of rough rice is suspended from a tripod of bamboo poles and hung about 5 feet from the ground. The threshed paddy is lifted by hand and placed on this sieve, which is moved back and forth between the legs of the tripod. In this process the dust and some of the chaff are caught up by the wind and carried away clear of the paddy, which falls to the ground below.



Rice seedlings are pulled up and tied into bundles to facilitate carrying them to the field. In a 1-acre nursery a farmer can produce enough seedlings for a 10-acre field.



Bundles of seedlings are carried from the nursery to the field in this simple fashion. The tops of the seedlings are cut off before transplanting.



Transplanting rice is a woman's job in Burma. It is not unusual for three women to plant approximately half an acre in an eight-hour day.



A forked stick is sometimes used for transplanting rice. This method, though less backbreaking than the one shown at the left, is not as widely used.



The harvested rice is spread on a level piece of ground near the village and threshed by the repeated tramping of cattle.



A sieve and tripod are used to winnow rice in Burma. The dust and chaff are carried away by the wind and the rice falls into a pile below the sieve.



Rice is stored in large bamboo baskets in the rural areas. The baskets are usually sealed with a plaster material made from clay and cow dung.



Most of Burma's rice goes from farm to market by boat.

Land Redistribution Under Way in Italy

by ERIC B. SHEARER



Virtually all political parties in Italy were convinced of the need for land reform at the end of World War II, but not until 1950 were these convictions translated into effective action. In that year two laws were passed authorizing expropriation and redistribution of land in Italy's most depressed areas. The first of these, the so-called "Sila" law, enacted in May 1950, was limited to the Sila area of Calabria (the southernmost region of the mainland) and adjacent coastal areas. The second, the "extract" law, was enacted in October 1950. Under it, land is to be redistributed in various districts of southern and central Italy and in the Po Delta. The two laws are essentially the same, differing only in regard to expropriation criteria. Under them, a total of about 1,700,000 acres has been or will be expropriated, and upward of 100,000 peasant families are expected to be settled on this land.

Redistribution under the Sila law began in a small way in September of 1950 and began under the extract law in December of 1951. By the end of December 1951 a total of 107,000 acres had been distributed under both laws. Three-fourths of the total is in the Sila area, where the first large-scale distribution took place in the fall of 1951, when 64,000 acres of land were allotted to 4,900 Calabrian peasant families in 9 villages.

Of the 64,000 acres distributed last fall, the majority (42,000) are located on the coastal plateau south of Crotone, in the two townships of Cutro and Isola Capo Rizzuto. Before distribution, this area contained classic examples of southern Italy's "latifondo"—the large estate. Here the backward methods of land management practiced for centuries on some of Italy's largest private properties—overgrazing, extensive wheat-horsebean-fallow rotations—kept levels of living almost incredibly low. Fifteen thousand people tried to make a living on 63,000 acres of land—land that, where tillable, was worked with the most primitive methods and tools. Much of it is so badly eroded that one marvels at the courage of those who hope to reclaim the bare ridges of brownish and greyish clay. Moreover, many

thousands of acres, for centuries uncultivated and covered with typical Mediterranean maquis, are in a semi-desert condition. There are no trees on this land for miles, aside from a handful of large olive groves, which belong to the big landowners and were not expropriated since they are considered improved land. There is not a building in sight on the land except an occasional sheep shelter or an ancient hunting lodge in decay.

The people live in one-room hovels in villages whose streets are unpaved, dusty in summer and rivers of water in winter. Only the main highway that passes through Cutro is passable for motor vehicles all year. The other villages in the neighborhood are reached over dirt tracks.

About 70 percent of the land in these two townships had been owned by five landowners, and less than 900 of the 2,400 peasant families that make up most of the population could call a piece of land their own. Of the 900, 860 owned an average of an acre and a half, most of it in small strips scattered about the edges of the villages.

The 15,000 people in the area had to depend on the land for a living, for there was almost no other economic activity. Nearly all the peasants worked as day laborers and/or rented small parcels of land by the year and paid rent in kind. An examination of family "budgets" showed that the annual consumption of all goods and services of many a family was \$150 to \$200, often at the cost of growing indebtedness. In fact, on the basis of the generally stated average of 150 workdays a year for, say, 2 wage earners in a family of 5, at the going wage of about 50 cents a day, the income of the family comes to no more than \$150 a year.

The first sign that things might change for the better came 2 years ago, when a new ERP-financed road was begun. Later, new housing for 90 worker families at Cutro was approved. Then, in 1950, came the "Sila" land redistribution law; and with it came

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Village of La Castella, typical of thousands of Italian communities where uneconomic use of the land has made living standards low.

money, tractors, deep plows, rooters to break up the brush land, new public works projects, and, finally, in the fall, the first expropriations of the latifondi. Pending final allotment of the land the Sila Agency worked out fair crop-share contracts with some of the peasants for work done on the expropriated land, furnishing tractor plowing, seed, and fertilizer. Last summer the Sila Agency also offered to collect fixed quantities of wheat from the small peasants at the official price. In the past, only the large operators had got that price; the small growers often had had to take as little as half the market price from itinerant brokers. (Wheat is the major crop of the area, but there are no commercial or cooperative storage facilities and no mills.)

After allotment of 42,000 acres had been accomplished in the fall of 1951, 70 percent of the land was owned by peasants as compared with 2 percent before expropriation. This action did not result in complete leveling of the landholding pattern, however. Under the Sila law, properties of less than 750 acres were not touched and 750 acres were left to each owner who had had more land than that. These properties, however, are expected to be subject to rigid improvement directives, in accordance with the law, under threat of expropriation. Besides, 2,500 acres of this undistributed area is communal land which is expected to be available for redistribu-

tion before long under a new law designed to promote the final subdivision among peasants of most of the communal lands remaining in Italy.

The allotment of land is not an improvised proceeding. It is based on a long series of complex operations, ranging from detailed land use surveys to a complete census of the peasant population, including the composition of the family, the usual occupation of its members, their land holdings, if any, and other possessions of an agricultural nature.

All the land to be redistributed is given a qualitative rating. After the total number of quality-point units available has been determined, each family is allotted a given number of units, depending on its size and on the size of its present holding, if any. The land is then divided into parcels consisting of various numbers of point units, corresponding with the claims of the various-sized families.

On allotment day, boxes are set up for holdings of each size (measured in quality-point units). Each box contains slips marked with the number and location of specific parcels. As the name of each family is called out and the number of units to which the family is entitled is stated, a little girl draws out one of the slips from the proper box. In this way, favoritism is ruled out; and the peasants are generally content to let the lottery decide the location of their holding. The villagers usually turn out in

full force on allotment day, and every effort is made to point up the significance of the event by appropriate ceremonies. Both at Cutro and Isola Capo Rizzuto the Italian Minister of Agriculture, Amintore Fanfani, was the principal speaker.

When the farmer gets his allotment and signs a contract with the Sila Agency, he is given a credit book that entitles him to an advance of about \$40 an acre for operating costs, repayable over 5 years. In addition, he will be paid at the official wage rate for improvement work that he undertakes on his land under the Agency's supervision. About half of the improvement costs, including labor, machine work, trees, and housing, he will pay back to the government over a 30-year period along with the full expropriation price of the land, at 3.5 percent interest. Calculations show that the average annual amortization per acre to be paid to the government is in many cases less than the annual rent that had been paid to the former landowner, often for the mere privilege of gambling with nature.

The average allotment of land in Cutro and Isola for the average family of five is 15 acres; holdings for larger families range up to 35 acres. The average holding in these communities will be by far the largest in Calabria because there is a greater proportion of expropriated land to population.

The other villages involved in the distribution of the fall and winter of 1950-51 were in a less favorable position: the average allotment there ranges from 7.5 to 11.5 acres. The Sila Agency technicians, while recognizing the theoretical advantages of slightly larger holdings, point out that there is every reason to believe that families on these smaller holdings will be able to make a fairly decent living on their farms because of the personal capacities of the new settlers and the adequate initial financial and technical assistance that is planned. Another point to consider is that in the communities where relatively little land was expropriated there is opportunity for outside employment. In fact, these opportunities should increase when the larger landowners begin improving their properties as required by the Sila law. At the same time, the possession of at least a subsistence homestead by each peasant family will prevent the tremendous competition for wage work that has been the principal cause of the low wages.

Too, the new landowners will be able to farm their land more efficiently than they did before expropriation. For example, the Sila Agency has a machinery pool with tractors and plows that will

plow a deeper furrow than was possible with the out-of-date equipment that peasants had used. With the deeper plowing, the land will retain more water. Besides, the plowing can be done quickly as soon as the compact clay is ready for cultivation. It is hoped that the peasants will become interested in organizing cooperatives so that the tractors and other machinery can eventually be turned over to local co-ops. In the meantime, the Agency will prohibit the erection of walls or fences between individual fields in order to make it feasible to use mechanical equipment.

Large-scale public works projects that are under way or planned not only will lay the basis for further development but also will help the new settlers over the financial hurdle of the first few years by providing off-the-farm employment. Roads are under construction and more are coming off the drafting boards; plans are being made to extend the Crotone Aqueduct to provide more water.

Exploration for water in the Cutro-Isola area has unfortunately given negative results, so that there seems to be no hope of bringing irrigation here. Modern technology, however, especially the maximum utilization of winter rain and the choice of crops, can go a long way toward offsetting this deficiency.

The construction of processing plants for all principal crops is planned—wheat storehouses, flour mills, olive presses, wineries, etc. These plants will also be cooperatively managed. They should in no small way contribute to a higher standard of living for the entire area, which today markets most of its produce unprocessed. One of the outstanding points of the agrarian renovation will be the decentralization of the population into individual farmhouses or, where more advisable, into small residential centers of perhaps 100 families.

The redistribution of land under the two land reform laws of 1950 is an important step for Italy. To the peasants who receive land, it is the turning point of their lives. If the plans of the land reform agencies to improve agricultural methods can be carried out, the increase in production will be a significant contribution to the Italian economy. Above all, in areas where the majority of the population now lives in miserable poverty, the transformation of large, generally underdeveloped estates into smallholdings intensively worked by peasant owners removes an important cause of the social and political unrest so characteristic of the depressed areas of Italy.

Cuba Expands Farm Credit Facilities

by ROBERT S. HOARD



Cuba recently established an Agricultural and Industrial Development Bank after a long and serious study of the agricultural problems of Cuba by Cubans themselves, as well as by advisors called in from other countries. As far as agriculture is concerned, operations are designed to provide much needed aid for the small farmer. Diversification of production, improvement in tenure relationships, and betterment in the living levels of the man on the land are all tied in with the availability of credit. In many areas of the world today, people are awakening to the possibility of a better life for the farmer. In Cuba the new bank is an important step in a plan to turn these possibilities into realities. Insofar as the bank can be useful in implementing the development of new crops for Cuba, such as the promising kenaf fiber, it can play a part in increasing the economic prosperity not only of the country but also of the individual farmers whose credit needs it meets.

Background of the Bank's Development

As long ago as 1898, at the time of Cuba's successful revolt from Spain, recommendations were made for establishing an agricultural bank. No real progress was made, however, until after the Revolution of 1933, when the President of Cuba invited the Foreign Policy Association of New York to make a study of the social and economic problems of Cuba. The results of this study were published in 1935 in a report entitled, "Problems of the New Cuba."

The report pointed out that, except for the sugar industry, short-term agricultural credit was almost ruinous to those who managed to obtain a little of it. Small growers were generally able to get loans only from middlemen, company stores, or local merchants. The rates of interest might not be high, but the borrower was forced to buy his supplies from the lender and sell his product to him. These two transactions were completely under the control of the lender and, of course, as much to his advantage as the indigence of the borrower allowed.

Even the long-term credit operations were unsatisfactory. Operations of farm mortgage financing by individuals did not meet the needs, and no national agricultural mortgage institution existed. The Foreign Policy Association report suggested establishing such a mortgage institution, therefore, giving precedence, however, to the need for short- and medium-term credit. The report suggested further that all agricultural credit be first pointed toward a diversification of agriculture, in order to shift Cuba's agricultural economy from its one-crop economy of sugar, which provided full employment for only 2 or 3 months of the year.

The political situation during the post-revolutionary years presented too many problems to permit major progress along farm credit lines, although in 1937 a 3-year economic and social plan was presented by the government. This plan took special note of the pressing land reforms needed to help stabilize Cuba's economy. In the agricultural field, two of the principal results of this 3-year plan were the laws of December 17, 1937, and February 1, 1938. The first of these laws provided for the colonization of state-owned or controlled lands. The second law provided for reform in the sugar industry; it revised tenant-owner relationships and established quotas on the quantity of sugarcane that could be milled from existing sugarcane land.

The Constitution of 1940 also contained agricultural reforms and stressed the social functions of property instead of the former principle of unlimited personal right to have, hold, and use property as the individual might desire.

The advent of the Second World War created immediate problems that had to be taken into account and postponed further implementation of agricultural reforms. So there was little change in Cuba's

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credit structure when the Second National Congress of Sugar and Agricultural Engineers met in Havana in 1948. The Congress had on its agenda the study of a national agricultural plan or policy.

Establishment of the Bank

Exactly three years after the project was proposed, the President of Cuba, on December 20, 1950, signed a new law, No. 5 of 1950, establishing an Agricultural and Industrial Development Bank and certain other agricultural organizations and regulations. This law followed closely that part of the plan outlined at the Second National Congress and much credit seems due those agronomists who devoted their time and energy to this pressing Cuban problem.

In brief the new law provided for the establishment of the bank and the organization and control of Rural Credit Associations and Boards and set up the rules for the issuance of short-, medium-, and long-term credits.

The bank is composed of two functional units, the Agricultural Division and the Industrial Division. The capital and development funds supplied the bank are equally divided between these two units, and profits will be proportionately divided between them in order to build up reserves. The bank will further finance itself by issuing bonds guaranteed by the securities offered for loans. The law provides limits on the amount and kind of bonds that may be offered by the bank. The Governing Board of the National Bank of Cuba must approve the issuance and sale of bonds, as well as certain other financial operations of the bank.

Provision is made in the law for short-, medium-, and long-term agricultural loans, up to 25 years. Although the handling of loans is not completely of a supervised credit nature, it appears that much guidance is planned and that inspection will be made to see that loans are used for the stated purpose. Agronomists will be available to help farmers make their applications on a sound agricultural basis.

Rural Credit Associations are to be local stock cooperatives, which will be under the supervision of the bank. They will carry on credit operations and stimulate agricultural improvement in the local areas. Rural Credit Boards, also under control of the bank, will be formed in areas where there are no branches of the bank or credit associations. These boards will accept loan applications from small and

medium-sized producers, thus extending the bank's facilities to every possible area of Cuba.

Operation of the Bank and Its Prospects

On October 9, 1951, the head office of the bank at Havana was inaugurated; a month before this the first branch office had been opened at Contramaestre, Oriente. Many months of preparation had preceded these two events. The officers of the bank had been named in January 1951, with Dr. Justo Carrillo Hernandez as president and José M. Irisarri as vice president in charge of the Agricultural Division. Shortly thereafter, training classes were begun for the first group of agronomists who were to be key technicians in organizing the Rural Credit Associations throughout the country. Positions in the bank were filled through competitive examinations.

Even before the main offices of the bank opened, credit operations had begun. In the agricultural field, these operations were limited to financing coffee and corn crops in the eastern section of Cuba and to investigating applications for loans from potato growers. In addition, the bank has been carrying on investigations and studies with regard to the kenaf industry, one of the most promising of the new crops through which Cuba hopes to diversify its agricultural industry.

The Cuban Government is now in a position to offer to its agricultural industry some of the real help that has so often been talked about in the past but about which little had been done.

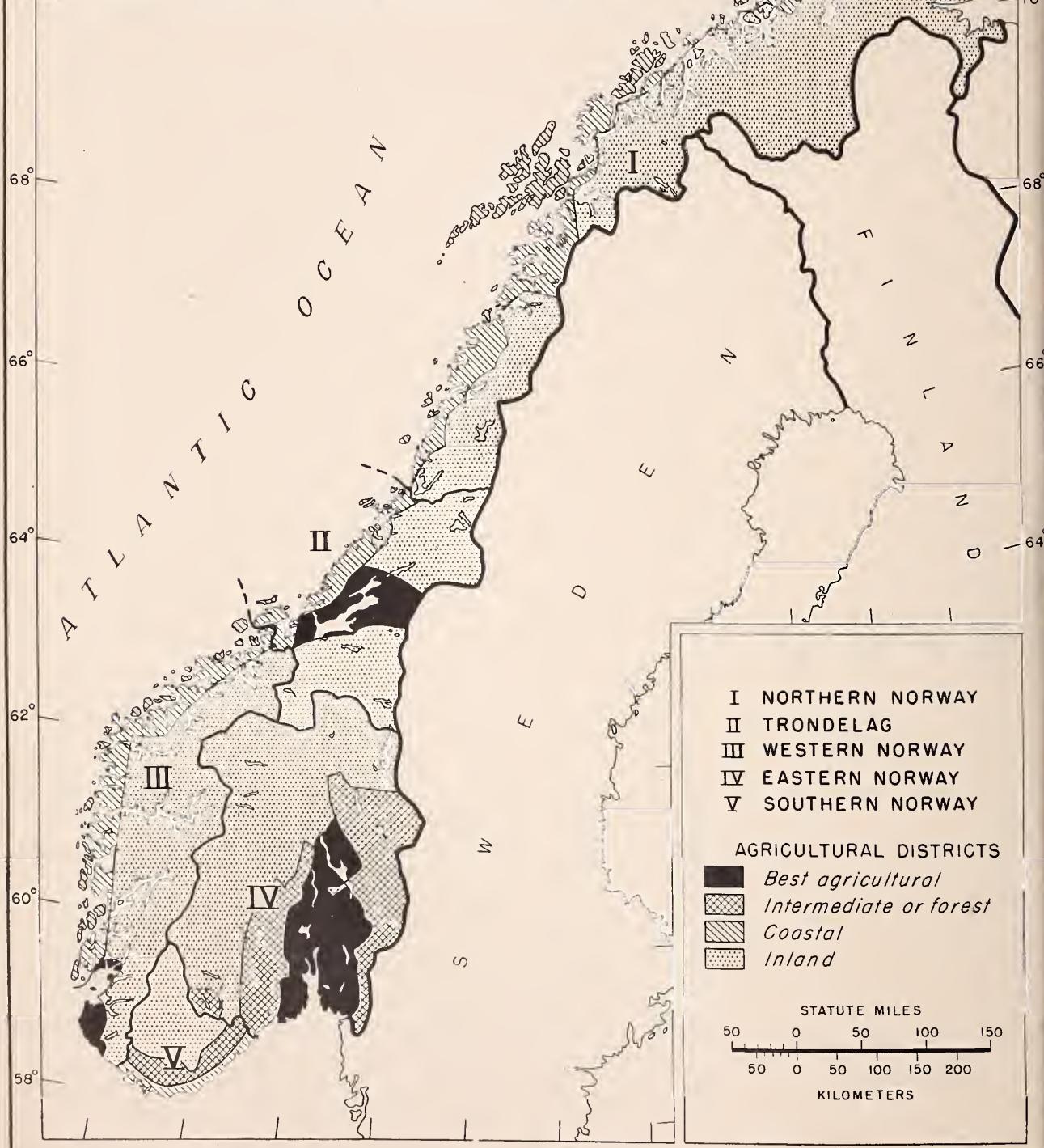
At the time of the inauguration of the main offices of the bank in Havana, both the President of Cuba, Dr. Carlos Prio Socarras, and the President of the Development Bank, Dr. Carrillo, emphasized the nonpolitical nature of the bank. Both also stated that operations of the bank were expected to bring about an increase in the volume and variety of agricultural and industrial production in Cuba. Another important aim stressed was that of providing credit to the small farmer, thus eliminating the usurious rates that have been prevalent in this type of financing.

The International Bank for Reconstruction and Development has just published the report of a study of the economy of Cuba. This report also emphasized the need of crop diversification in Cuba and stressed the fact that dynamic development is needed in all fields. It is believed that the new Agricultural and Industrial Development Bank can and will be an answer to these needs.

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NORWAY

AGRICULTURAL DISTRICTS



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